

PRODUCT DESCRIPTION

Stonchem 622 is a highly cross-linked, novolac epoxy, conductive and spark-proof lining system applied at a nominal thickness of 40 mil/1 mm. The mortarcoat, carbon filled topcoat sequencing provides a light-duty conductive and non-sparking chemical barrier. When tested using the ASTM F150 test method, this carbon based system measures a resistance lower than 1,000,000 ohms. The Stonchem 622 system has excellent resistance to concentrated sulfuric acid, chlorinated solvents and caustics.

USES, APPLICATIONS

- Explosion proof rooms
- Secondary containment areas
- Concrete pads and pedestals
- Splash/spill areas
- Solvent storage
- Tank farms

PRODUCT ADVANTAGES

- Excellent chemical resistance to concentrated sulfuric acid, chlorinated solvents and caustics
- Mortar adds abrasion resistance
- Carbon composite filled
- Factory proportioned units for easy application
- Conductive and non-sparking

CHEMICAL RESISTANCE

Stonchem 622 is formulated to resist a variety of chemical solutions. Refer to the Stonchem 600 Series Chemical Resistance Guide, which lists reagent concentration and temperature recommendations for each product.

PACKAGING

Stonchem 622 is packaged in units for easy handling. Each unit consists of:

Mortarcoat

1 carton of Stonchem 620 Series Mortarcoat
 A carton contains:
 4 foil bags of amine
 4 poly bags of resin
 4 bags of Mortar aggregate

Topcoat

1 carton of Stonchem 620 Series Topcoat
 A carton contains:
 2 foil bags of amine
 2 cans of resin

PHYSICAL CHARACTERISTICS

Tensile Strength (ASTM D-638)	30 N/mm ²
Flexural Strength (ASTM C-580)	69 N/mm ²
Flexural Modulus of Elasticity (ASTM C-580)	6.8 x 10 ³ N/mm ²
Hardness. (ASTM D-2240, Shore D)	85 to 90
Abrasion Resistance (ASTM D-4060, CS-17)	0.07 gm max. weight loss
Thermal Coefficient of Linear Expansion (ASTM C-531)	2.1 x 10 ⁻⁵ m/mm°C
Color	Black

Note: The above physical properties were measured in accordance with the referenced standards. Samples of the actual system, including binder and filler, were used as test specimens.

COVERAGE

Each unit of Stonchem 622 will cover approximately 16.72 m² at a thickness of 1 mm.

Note: Coverage rates shown are theoretical. Actual coverage rates may vary. Make necessary allowances for the condition of the surface to be coated, working conditions, waste, spillage, experience level and skill of the installers, etc.

STORAGE CONDITIONS

Store all components between 10 to 24°C in a dry area. Keep out of direct sunlight. Avoid excessive heat and do not freeze. The shelf life is 3 years in the original, unopened container.

SUBSTRATE PREPARATION

Proper preparation is critical to ensure an adequate bond. The substrate must be dry and free of all wax, grease, oils, fats, soil, loose or foreign materials and laitance. Laitance and unbonded cement particles must be removed by mechanical methods, i.e., abrasive blasting or scarifying. Other contaminants may be removed by scrubbing with a heavy-duty industrial detergent and rinsing with clean water. The surface must show open pores throughout and have a sandpaper texture. For recommendations or additional information regarding substrate preparation, contact Stonhard's Technical Service Department.

APPLICATION GUIDELINES

Before mixing and applying any material, make sure environmental conditions are satisfactory for application. For optimal working conditions, the substrate temperature must be between 15 to 27°C. Measure the surface temperature with a surface thermometer. Cold areas must be heated until the slab temperature is above 13°C. This will allow the material to achieve a proper cure. Also, a cold substrate will make the material stiff and difficult to apply. Warm areas or areas in direct sunlight must be shaded or arrangements made to work during evenings or at night. A warm substrate (15 to 27°C) will aid in the material's workability; however, a hot substrate (27 to 37°C) or a substrate directly in the sun will shorten the material's working time and can cause other phenomenon such as pinholing and bubbling.

APPLICATION

Priming

Vacuum the surface before priming and make sure the concrete substrate is dry. The use of HT Primer is necessary in all applications of Stonchem 622. This ensures maximum product performance. (See the HT Primer Product Data sheet for details.)

Note: HT Primer must be tack-free prior to application of the Mortarcoat.

Mortarcoat

Pre-mix amine and resin in a 5 gallon mixing bucket with a heavy-duty, slow-speed drill (400 to 600 rpm) with a Jiffy mixer for one minute. Next, gradually add Mortarcoat aggregate while mixing for an additional two minutes. Mixing is complete when no dry clumps of material exist. For vertical applications, pre-mix resin with 620 Vertical Mortarcoat aggregate in a 5 gallon mixing bucket. Mix with a heavy-duty, slowspeed drill (400 to 600 rpm) with a Jiffy mixer until all fibers are completely mixed in. Then, in the same mixing bucket, mix the amine and resin for one minute. Next, gradually add Mortarcoat aggregate while mixing for an additional 90 seconds. Mixing is complete when no clumps of dry material exist. Apply the Mortarcoat onto the substrate using a 15 mil notched squeegee. For vertical surfaces use a large trowel to pull an initial coat of material onto the wall, then finish smooth with a flat rubber squeegee. Allow 4 - 6 hours to cure before proceeding.

Note: If the application requires a conductive system, you must test the mortarcoat layer for conductivity using the megger to ensure it is within the proper range. The conductivity of the mortarcoat layer must be below 500,000 ohms.

Topcoat

Lightly sand the Mortarcoat in areas where protrusions exist. Vacuum the area completely. Mix amine and resin in a 5 gallon mixing container using a heavy-duty, slow-speed drill (400 to 600 rpm) with a Jiffy Mixer for 2 minutes. Pour the material onto the floor and spread out with a 15 mil notched squeegee. Backroll the area with a medium nap roller to remove squeegee lines, using long roll strokes to decrease the visibility of roller lines.

For vertical surfaces, pour a bead of material along the base of the wall and, using a medium nap roller, roll the material onto the vertical surface. The wet film thickness of the coating is 250 to 300 microns. Check the thickness with a wet film gauge. If the coating is too thick, the conductivity readings will be affected.

Note: If the application requires a conductive system, you must test the finished system for conductivity using the megger to ensure it is within the proper range. The conductivity of the final system should be below 1,000,000 ohms. A static control report detailing the resistance readings over the entire area must be filled out and submitted to the customer.

CURING

The surface of Stonchem 622 will be tack-free in 4 to 6 hours at 21°C. The coated area may be put back in service in 24 hours at 21°C. Ultimate physical characteristics will be achieved in 7 days.

RECOMMENDATIONS

- Apply only on clean, sound, dry and properly prepared substrates.
- Minimum ambient and surface temperature is 13°C at the time of application.
- Maximum surface temperature should not exceed 32°C during application. **Substrate temperatures above 32°C will drastically affect the working time of the product.**
- Substrate temperature should be greater than 3°C above dew point.
- Material should not be applied if humidity is above 85%.
- Application and curing times are dependent upon ambient and surface conditions. Consult Stonhard's Technical Service Department if conditions are not within recommended guidelines.

PRECAUTIONS

- Solvents are recommended for clean up of unreacted material. Use these materials only in strict accordance with the manufacturers recommended safety procedures. Dispose of waste materials in accordance with government regulations.
- Avoid contact with Stonchem 622 resin and amine, as they may cause skin, respiratory and eye irritation.
- **The use of NIOSH/MSHA approved respirators using an organic vapor/acid gas cartridge is recommended.**
- The selection of proper protective clothing and equipment will significantly reduce the risk of injury. Body covering apparel, safety goggles and impermeable nitrile gloves are highly recommended.
- In the event of accidental eye contact, rinse eyes immediately with water.
- In case of contact, flush the area with copious amounts of water for 15 minutes and seek medical attention. Wash skin with soap and water.
- If material is ingested, immediately contact a physician. **DO NOT INDUCE VOMITING.**
- Use only with adequate ventilation. Inhalation of vapors may cause severe headaches, nausea and possibly unconsciousness.

NOTES

- Material Safety Data Sheets for Stonchem 622 are available upon request.
- Specific information regarding chemical resistance of Stonchem 622 is available in the Stonchem 600 Series Chemical Resistance Guide.
- A staff of technical service engineers is available to assist with product application, or to answer questions related to Stonhard products.
- Requests for technical literature or service can be made through local sales representatives and offices, or corporate offices located worldwide.

IMPORTANT:

Stonhard believes the information contained here to be true and accurate as of the date of publication. Stonhard makes no warranty, expressed or implied, based on this literature and assumes no responsibility for consequential or incidental damages in the use of the systems described, including any warranty of merchantability or fitness. Information contained here is for evaluation only. We further reserve the right to modify and change products or literature at any time and without prior notice.

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